

REMARKS

Summary of the Office Action

The amendment filed 27 June 2005 is objected to under 35 U.S.C. § 132(a) because it introduces new matter into the disclosure.

Claims 9-14 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 11 and 16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 8 and 17 are rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 4,509,607 to Saxman et al. (hereinafter "Saxman").

Claims 9, 10, 12-15, 18 and 19 are rejected under 35 U.S.C. § 103(a), as being unpatentable over Saxman in view of U.S. Patent No. 2,627,431 to Sechrist and U.S. Patent No. 5,295,549 to Dolezal et al. (hereinafter "Dolezal").

Claim 20 is rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 4,448,271 to Persson in view of U.S. Patent No. 5,839,523 to Brolund, Sechrist and Dolezal.

Summary of the Response to the Office Action

Paragraph 0015 has been amended to replace subject matter that was present in the application as original filed, i.e., present in PCT/SE04/00116, but which was inadvertently omitted in the substitute specification filed June 27, 2005. Accordingly, no new matter had been entered by this amendment.

Claim 9 has been amended in accordance with the Examiner's helpful suggestion to change "outwardly" to "inwardly." As noted in the Office Action, the combination of features as recited in amended claim 9 is consistent with the application as originally filed, and therefore no new matter has been added by this amendment. Claims 8, 16 and 20 have also been amended, and claims 10-15 and 17-19 remain as previously presented. Thus, claims 8-20 remain pending and are resubmitted for consideration.

All Claims Define Allowable Subject Matter

The objection under 35 U.S.C. § 132(a) and the rejection of claims 9-14 under 35 U.S.C. § 112, first paragraph, are respectfully traversed in view of the above amendment to claim 9. Specifically, in accordance with the Examiner's helpful suggestions, claim 9 has been amended to change "outwardly" to "inwardly." Accordingly, it is respectfully submitted that the objection and rejections should be withdrawn.

The rejection under 35 U.S.C. § 112, second paragraph, of claims 11 and 16 is respectfully traversed in view of the above amendment to claim 16 and the following comments. Claims 11 and 16 each depend, either indirectly or directly, from claim 9, which recites a combination of features including, *inter alia*, "a pin secured in a recess formed in the respective cover." Accordingly, it is respectfully submitted that claims 11 and 16 fully comply with 35 U.S.C. § 112, and that the rejections under the second paragraph thereof should be withdrawn.

Independent claim 8 stands rejected under 35 U.S.C. § 102(b), as being anticipated by Saxman. This rejection is respectfully traversed in view of the above amendments to claim 8 and the following comments.

To anticipate a claim, a reference must teach every element of the claim. See MPEP § 2131. It is respectfully submitted that Saxman fails to teach each and every feature recited in claim 8.

Claim 8 recites a roller cutter that includes, *inter alia*, "a pair of lubricant seals disposed adjacent respective ends of the shaft and extending radially between and contiguously engaging the shaft and the hub" and "a pair of covers spaced axially outwardly from and covering the respective seals." Support for these combinations of features may be found in Applicants' specification at, for example, paragraph 0017. For example, with reference to Applicant's Figure 3A, sealing members 30 (only one is indicated) connect a shaft 33 with a hub 24, and covers 29 protect the sealing members 30.

According to the Office Action, Saxman's Figure 3 shows a "pair of lubricant seals (122, 124); and a pair of covers (110, 112)." Saxman states at column 4, lines 30-36, that opposed end plates 110 and 112 respectively define shoulders 118 and 120 for "receiving and bonding thereto the non-rotating half of the primary sealing means 122, 124." Saxman further states at column 4, lines 40-42, that "[s]houlders 130 and 132 are provided for receiving and bonding thereto, in

opposed sealed engagement, the rotating half 134, 136 of the primary sealing means.” Thus, as clearly shown in Saxman’s Figure 3, the primary sealing means 122, 124 connect to the end plates 110 and 112, and fails to teach or suggest extending radially between and contiguously engaging the shaft and the hub, as recited in Applicant’s independent claim 8. Moreover, Saxman fails to teach or suggest axial spacing between the pair of covers and the respective seals, as also recited in Applicant’s independent claim 8.

Whereas Applicant’s covers protect the seals, Saxman’s end plates 110, 112, in combination with the primary seals 122, 124 that are bonded thereto, provide an internal sealed volume 142 “within which are positioned the roller bearing means 106, 108 and the metal faced primary seals 122 and 124” and which is “filled with lubricant to maintain the seals and the bearings at all times in a lubricated condition” (*see* Saxman column 4, lines 47-52).

For at least any of the above reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 102(b) of independent claim 8 should be withdrawn, and that this claim is allowable over Saxman.

Claim 17 depends from independent claim 8 and therefore recites the same allowable combination of features, as well as reciting additional features that further distinguish over Saxman. Therefore, it is respectfully submitted that the rejection under 35 U.S.C. § 102(b) of claim 17 should also be withdrawn, and that this claim is also allowable over Saxman.

With regard to claims 9, 10, 12-15, 18 and 19, the Office Action acknowledges that Saxman fails to show a pin, a v-shaped groove, inclined surfaces, or to provide a lock against rotation. The Office Action relies on Dolezal to teach the advantages of making a seal ring non-rotatable, and relies on Sechrist to describe a generic pin and groove arrangement. Even if Dolezal and Sechrist could be combined with Saxman, a proposition that Applicant does not accept, they would still fail to overcome the deficiencies of Saxman discussed above with respect to claim 8.

For at least any of the above reasons, it is respectfully submitted that the rejections under 35 U.S.C. § 103(a) of claims 9, 10, 12-15, 18 and 19 should be withdrawn, and that these claims are allowable over the combination of Saxman, Sechrist and Dolezal, as set forth in the Office Action.

Independent claim 20 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over Persson in view of Brolund, Sechrist and Dolezal. This rejection is respectfully traversed in view of the above amendments to claim 20 and the following comments.

To establish a *prima facie* case of obviousness, the prior art references (or references when combined) must, among other things, teach or suggest all of the claim limitations. See In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In addition, “all words in a claim must be considered in judging the patentability of that claim against the prior art. See In re Wilson, 424 F.2d 1382, 1385; 165 USPQ 494, 496 (CCPA 1970). See MPEP § 2143.03. It is respectfully submitted that the combination of references fails to teach each and every feature recited in claim 20.

Applicant’s independent claim 20 recites a raise bore cutting apparatus including, *inter alia*, “a pair of lubricant seals disposed adjacent respective ends of the shaft and extending radially between and contiguously engaging the shaft and the hub” and “a pair of covers spaced axially outwardly from and covering the respective seals,” similar to independent claim 8.

The Office Action relies on Persson to describe a raise boring cutter, but acknowledges that Persson fails to teach or suggest the details of the roller cutter such as the hub, shaft, seals and cover. The Office Action relies on Brolund to teach a roller cutter device including a hub 16, a shaft 12, lubricant seals 33 and covers 32, but acknowledges that Brolund fails to teach or suggest the covers 32 that have a projection or an indentation in the shaft 12. The Office Action relies on Dolezal to teach the advantages of making a seal ring non-rotatable, and relies on Sechrist to describe a generic pin and groove arrangement. Even if Persson, Brolund, Sechrist and Dolezal could be combined, a proposition that Applicant does not accept, they would still fail to teach or suggest at least a pair of lubricant seals extending radially between and contiguously engaging the shaft and the hub as recited in claim 20. In particular, Brolund’s seals 33, like Saxman’s primary sealing means 122, 124 discussed above, do not extend radially between and contiguously engage Brolund’s shaft 12 and the roller body 16.

For at least any of the above reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of independent claim 20 should be withdrawn, and that this claim is allowable over Persson, Brolund, Sechrist and Dolezal, whether considered individually or in combination.

CONCLUSION

In view of the foregoing, Applicants submit that the pending claims are in condition for allowance, and respectfully request withdrawal of all outstanding rejections, and request the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite the prosecution.


EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

DRINKER BIDDLE & REATH LLP

Dated: May 7, 2007

By:



Scott J. Anchell
Reg. No. 35,035

Customer No. 055694
DRINKER BIDDLE & REATH LLP
1500 K Street, N.W., Suite 1100
Washington, DC 20005-1209
Tel.: (202) 842-8800
Fax: (202) 842-8465